REMARKS

This Response responds to the Office Action dated June 18, 2003 in which the Examiner rejected claims 1, 4-6, 8 and 10-15 under 35 U.S.C. §103.

Claim 1 claims an electronic apparatus comprising an electronic circuit board, an electrically conductive casing, a semiconductor element module and a resin fixture. The electrically conductive casing is for encasing the electronic circuit board. The semiconductor element module electrically is connected to the electronic circuit board via a plurality of lead terminals. The semiconductor element module has a column-shaped section. An axis of the column-shaped section is parallel to a direction of extension of the lead terminals. The resin fixture intervenes between the electrically conductive casing and the semiconductor element module. The resin fixture is mounted with the semiconductor element module and is fitted to the electrically conductive casing. The resin fixture has a cylinder-shaped section for retaining, in its inner periphery, the column-shaped section of the semiconductor element module. An outer periphery surface of the cylinder-shaped section is metal plated and an inner periphery surface of the cylinder-shaped section is not metal plated.

Through the structure of the claimed invention having a resin fixture a) intervening between an electrically conductive casing and a semiconductor module, b) having a cylinder-shaped section for retaining a column-shaped section of a semiconductor element module in its inner periphery and c) having an outer surface which is metal plated and an inner surface which is not metal plated, as claimed in claim 1, the claimed invention provides an electronic apparatus which allows the semiconductor element module to be

reliably fitted inside the resin fixture and ensures electrical insulation between the semiconductor element module and the casing. The prior art does not show, teach or suggest the invention as claimed in claim 1.

Claims 1 and 8 were rejected under 35 U.S.C. §103 as being unpatentable over *Teruhiro* (Japanese Reference 09-270747) in view of *Hirota* (U.S. Patent No. 6,168,465).

Applicant respectfully traverses the Examiner's rejection of the claims under 35 U.S.C. §103. The claims have been reviewed in light of the Office Action, and for reasons which will be set forth below, Applicant respectfully requests the Examiner withdraws the rejection to the claims and allows the claims to issue.

Teruhiro appears to disclose in Figure 1 a casing 14, a block 16, an opening 18 formed in the casing and an opening 19 formed on each of two opposite side surface of the block 16. The opening 18 and the opening 19 engage with each other. As shown in Figure 6, the assemblies are mounted into the casing 14 in such a manner that the convex portion or opening 19 formed on the side surface of the block 16 fits into the opening or convex portion 18 formed on the side surface of the casing 14. Openings 20a, 20b in the block are formed such that the lead terminals 14a and 14b are individually inserted therein. The lead terminal 40a is soldered to the opening 22a of the flexible substrate and lead terminal 4b is soldered to the opening 22b of flexible substrate.

Thus, *Teruhiro* merely discloses a U-shaped block 16. Nothing in *Teruhiro* shows, teaches or suggests a resin fixture having a cylinder-shaped section as claimed in claim 1. Rather, *Teruhiro* merely discloses a U-shaped block.

Additionally, *Teruhiro* merely discloses openings 20a, 20b formed in the block 16 for the lead terminals of an optical semiconductor module 3. Nothing in *Teruhiro* shows, teaches or suggests a resin fixture retaining a column-shaped section of a semiconductor element module in (inside) its inner periphery as claimed in claim 1. Rather, *Teruhiro* merely discloses openings formed in the block for the lead terminals of the module.

Also, *Teruhiro* merely discloses a block 16 inserted into an opening in casing 14. Nothing in *Teruhiro* shows, teaches or suggests a resin fixture having an outer surface which is metal plated and an inner surface which is not metal plated as claimed in claim 1. Rather, *Teruhiro* merely discloses that the block 16 is fitted into the casing 14.

Finally, *Teruhiro* merely discloses U-shaped block 16 inserted into casing 14. Nothing in *Teruhiro* shows, teaches or suggests a resin fixture intervening between an electrically conductive casing and a semiconductor module as claimed in claim 1. Rather, *Teruhiro* merely discloses that the block 16 is inserted into a casing 14.

Hirota appears to disclose as seen in FIG. 8, a plurality of terminals 22 each having a shell 3 are placed together on an attachment base 2, which in turn is fixed to the converter body 21 with screws 4. (col. 7, lines 43-46) FIGS. 12A and 12B show a third embodiment of a terminal structure of the receiver-side converter. FIG. 12A is a partial sectional-side view and FIG. 12B is a bottom view. In the terminal structure of this embodiment, the attachment base 2 is formed of a plastic molding. Metallic shells 3 (with male thread on the outer peripheral side) formed by machining, roll-forming or other processes are inserted when fused plastic is molded to a die, whereby the fused plastic flows around the shells 3 and is cured as it is cooled to form an integral structure of the

attachment base 2 with the shells 3 fixed. (col. 8, lines 54-64) FIGS. 14A and 14B show an embodiment in which inner parts 14 constituting output terminals 8 are formed by resin molding. When formed, inner parts 14 are integrally molded with connecting members 15 to form a blocked series of inner parts 14. The thus formed blocked series of several inner parts is inserted together, as shown in FIG. 14A, into a continuous series of terminal joint modules each composed of an attachment base 2 and shells 3. In this operation, when blocked inner parts 14 are inserted into the shells 3, connecting members 15 between inner parts 14 are punched away while the inner parts 14 are assembled in place by press-fitting (see FIG. 14B). (col. 9, lines 17-28) In contrast to the above comparative example, an attachment base 2 with a multiple number of terminal shells 3 is fixed to the converter body 1 with screws 4 to form a multiple terminal structure as seen in FIGS. 17A and 17B. In view of the corrosion resistance, the surfaces of the shells 3 and the attachment base 2 are plated with a metal having good contact performance. (col. 10, line 66 through col. 11, line 5)

Thus, *Hirota* merely discloses a resin inner part 14 is inserted into or inside a metal shell 3 fixed to a main body 1. In other words, *Hirota* merely discloses a metal shell 3 intervening between a resin part 14 and a main body 1. However, as claimed in claim 1, a resin fixture intervenes between an electrically conductive casing and a semiconductor element module. *Hirota* teaches away from the claimed invention since the metal shell 3 intervenes between the resin inner part 14 and the main body 1.

Additionally, *Hirota* merely discloses that the metal shell 3 is fixed onto the main body 1. However, as claimed in claim 1, the resin fixture is fitted to an electrically

conductive casing. However, *Hirota* merely discloses a metal shell 3 fixed onto a main body 1.

Additionally, *Hirota* merely discloses that the shell 3 is made of metal. However, as claimed in claim 1, the fixture is made of resin. *Hirota* teaches away from the claimed invention and discloses a shell 3 made of metal.

Also, *Hirota* merely discloses a metal shell 3 which is electrically conductive between its inner and outer surfaces. However, as claimed in claim 1, the resin fixture has an outer surface which is metal plated and an inner surface which is not metal plated. Thus, the resin fixture in the claimed invention is electrically insulated between its inside and outside surfaces since the metal is only coated on the outside surface. However, *Hirota* teaches away from the claim invention since the metal shell 3 is electrically conductive between its inside and outside surfaces.

Furthermore, *Hirota* merely discloses inserting a resin part 14 inside a metal shell 3 and thus does not show, teach or suggest a resin fixture mounted with a semiconductor element module as claimed in claim 1.

Finally, *Hirota* merely discloses metallic shells 3 having a male thread on an outer peripheral side and having resin inner parts 14 inserted into the shells 3 to form the output terminals 8. In other words *Hirota* discloses a male connector which is to be connected to a female cable plug. Thus nothing in *Hirota* shows, teaches or suggests or suggests a resin fixture retaining a column-shaped section of a semiconductor element module in (inside) its inner periphery as claimed in claim 1 (i.e., a female connector to connect to the male semiconductor element module). Rather, the metallic shells 3 of *Hirota* with the male

connector clearly indicate that the cable plug mates must be a female cable plug. Thus the female cable plug of *Hirota* would surround the male threaded metallic shells 3. Nothing in *Hirota* shows, teaches or suggests that the male shell 3 could retain a column-shaped section of a module inside itself since it is a male connector not a female connector.

Applicants respectfully submit that the combination of *Teruhiro* and *Hirota* would not be possible since *Hirota* merely discloses a metal shell 3 in direct contact with a main body and therefore does not impart a heat insulating nature to a flange for fixing a semiconductor element module. In other words, heat insulation is not taken into consideration in *Hirota*. Therefore, the combination of *Hirota* and *Teruhiro* would not be possible. Even assuming arguendo that the combination of *Teruhiro* and *Hirota* would be possible, the combination would merely suggest to replace the U-shaped block 16 with the lead openings 20a, 20b of *Teruhiro* for a male threaded metallic shell 3 to attach to a female cable plug as taught by *Hirota*. Thus nothing in the combination of *Teruhiro* and *Hirota* show, teach or suggest a resin fixture a) intervening between an electrically conductive casing and a semiconductor module element, b) having a cylinder-shaped section for retaining, in its inner periphery, a column-shaped section of a semiconductor element module and c) having an outer surface which is metal plated and an inner surface which is not metal plated as claimed in claim 1. Therefore, Applicant respectfully requests the Examiner withdraws the rejection to claim 1 under 35 U.S.C. §103.

Claim 8 depends from claim 1 and recites additional features. It is respectfully submitted that claim 8 would not have been obvious within the meaning of 35 U.S.C. §103 over *Teruhiro* and *Hirota* at least for the reasons as set forth above. Therefore, it is

respectfully requested that the Examiner withdraws the rejection to claim 8 under 35 U.S.C. §103.

Claims 4-6 and 10-15 were rejected under 35 U.S.C. §103 as being unpatentable over *Teruhiro* and *Hirota* and further in view of *Suzuki et al.* (U.S. Patent No. 5,073,047).

Applicant respectfully traverses the Examiner's rejection of the claims under 35 U.S.C. §103. The claims have been reviewed in light of the Office Action and for reasons which will be set forth below, it is respectfully requested that the Examiner withdraws the rejection to the claims and allows the claims to issue.

As discussed above, since nothing in the combination of *Teruhiro* and *Hirota* show, teach or suggest the primary features as claimed in claim 1, Applicant respectfully submits that the combination of *Teruhiro* and *Hirota* with a secondary reference of *Suzuki et al.* will not overcome the deficiencies of the primary references. Therefore, Applicant respectfully requests the Examiner withdraws the rejection to claims 4-6 and 10-15 under 35 U.S.C. §103.

Thus it now appears that the application is in condition for reconsideration and allowance. Reconsideration and allowance at an early date are respectfully requested. Should the Examiner find that the application is not now in condition for allowance, Applicant respectfully requests that this response be entered for purposes of appeal.

If for any reason Examiner feels that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the Applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed within the currently set shortened statutory period, Applicant respectfully petitions for an appropriate extension of time. The fees for such extension of time may be charged to our Deposit Account No. 02-4800.

In the event that any additional fees are due with this paper, please charge our Deposit Account No. 02-4800.

Respectfully submitted,

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